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ABSTRACT

The initial intent for this study was to tease out the sources of the most critical contributor to individuals' engagement in dangerous behaviors and to add to the literature addressing these at-risk behaviors by attending to the limitations of the current body of literature. White university students (N=60) completed three measures for the study: the Developmental Survey of Risk Taking Behavior, the Parental Acceptance-Rejection Questionnaire (PARQ) and the Personality Assessment Questionnaire (PAQ). Findings suggest that the degree to which White freshmen and sophomore university students currently engage in at-risk behaviors is more strongly associated with early childhood experiences with parents and behaviors during early elementary school years than with current personality variables. In part, findings on the surface appear to support the social/environmental theories that imply that at-risk behaviors are integrally linked with family dynamics. This is particularly true given that data indicates engagement in at-risk behaviors are significantly associated with fathers' and mothers' parenting and with individuals' earlier engagement in at-risk behaviors. Those individuals who reported a tendency to 'misbehave' during precollege years and whose mothers expressed less warmth and more aggression, and whose fathers expressed more aggression and more neglect were found to currently engage in at-risk behaviors more often. It is emphasized that clinicians must be able to ask the right questions in order to discern whether the etiology of engagement in at-risk behaviors is biological or social/environmental in nature in order to know how to best proceed in treatment and referrals. (Contains 35 references and 4 tables.) (GCP)

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Running head: Students' At Risk Behaviors

ED 431 159

University Students' Engagement in At Risk Behaviors: A Study of Past Parenting and Current Personality

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University Students' Engagement in At Risk Behaviors:

A Study of Past Parenting and current Personality

Abstract

Findings suggests that the degree to which White freshmen and sophomore university students currently engage in at-risk behaviors is more strongly associated with early childhood experiences with parents and behaviors during the elementary school years, than with current personality variables. In one way, findings on the surface appear to support the social/environmental theories which imply that at-risk behaviors are integrally linked with family dynamics (Hawkins & Fitzgibbon, 1993; Werner, 1991; Turner, Irwin, Tschann, & Millstein, 1993). This is particularly true given that data indicates engagement in at-risk behaviors are significantly associated with fathers and mothers parenting and with individuals' earlier engagement in at-risk behaviors. Those individuals who reported a tendency to 'misbehave' during pre-college years and whose mothers expressed less warmth and more aggression, and whose fathers expressed more aggression and more neglect were found to currently engage in at-risk behaviors more often.

University Students' Engagement in At Risk Behaviors:

A Study of Past Parenting and Current Personality

Studies indicate that approximately 50% of the United States' 28 million adolescents are at a level of moderate to high risk due to the engagement in a variety of behaviors that can result in irreconcilable, negative consequences (Dryfoos, 1990; Dougherty, 1993; Institute of Medicine, 1989). These behaviors, described as at-risk, are defined as any activities that deviate from socially accepted norms, elicit societal rebuke, and invite a social control response from the adult community (Donovan, Jessor, & Costa, 1991; Jessor & Jessor, 1975; Shedler & Block, 1990). Fifty percent of youth, 12-21 years of age, have been found to self-identify as smokers; thirty three percent were found to use some type of illegal drug; thirty percent of driving age adolescents reported drinking while driving; twenty-five percent of adolescents reported at least one episode of having five or more alcoholic drinks in sequence within the month of data collection; nineteen percent of sexually experienced youth were found to use drugs or alcohol prior to their last sexual encounter; and, fourteen percent reported carrying a weapon at least one day during the past month (Alexander, Young, Ensminger, Johnson, Smith, & Dolan, 1990; Baumrind, 1991; Adams, 1992; National Center for Health Statistics, 1992). Given smoking related cancer, the overpopulation of the prison population, the prevalence of the HIV virus, drug and alcohol related deaths and crimes, and the ineffectiveness of many substance abuse interventions, the personal and economic costs for individual families, as well as the national cost in terms of funding for health care, education, teen and single parent pregnancies, and the penal system, are extensive (American Medical Association, 1990). The link between adolescents'

engagement in at-risk behaviors and the potential lost of human resources within the citizenship is well established, and this link, alone, warrants considerable attention from researchers.

In an effort to provide an overview of ways of conceptualizing the etiology of the engagement in at-risk behaviors, Igra and Irwin, Jr. (1996) presented a comprehensive discussion of the literature purporting three potential explanations for adolescents' engagement in behaviors that put them and others around them at risk for harm: Biological, Psychological, and Social/Environmental Theories. The biological based theories propose that engagement in at-risk behavior is genetic, and, consequently, inherited or hormonal in nature (Irwin & Millstein, 1986, Irwin & Ryan, 1989). In this case, regardless, there would be no significant relationship between engagement in at-risk behaviors and the family structure, parenting, or social-class. It might be assumed that the only viable interventions might include either a structured and controlled life setting, in conjunction with medication (s) that assist in controlling behaviors and/or cognitions that lead to such behaviors.

The next two theories tend to suggest that engagement in at-risk behaviors might be more amenable to conventional group and individual counseling interventions. The first, psychological theory, suggests that risk-taking behaviors might be attributed to deficits in an individual's self-esteem, cognitive immaturity, or high sensation seeking aspects of one's personality (Elkind, 1967; Fischoff, 1992; Keating, 1990; Zuckerman, 1990; Zuckerman, 1991; Newcomb & McGee, 1991). This theory purports that the dangerous behavior is a direct reflection of individuals' unresolved psychological/emotional issues or behavioral or cognitive skill deficits.

Baumrind (1991) has most recently presented an alternative means of conceptualizing the engagement of at-risk behaviors as a normative and adaptive aspect of psychosocial development. In this theory, risk-taking behavior is conceptualized as a means of coping with normal

developmental tasks such as autonomy, self-regulation, and exploration. In this case, parenting styles that allowed for some exploration were found to be significantly associated with healthy, competent adolescents. Though, this perspective has been most recently developed, it might be easily subsumed under the psychological theory category in spite of the perception of the engagement in at-risk behaviors as being a normal, healthy part of human development. This perspective would be particularly important for professionals within Counseling Psychology whose work focuses primarily on 'normal' populations.

Social/environmental theories imply that at-risk behaviors are integrally linked with family (Hawkins & Fitzgibbon, 1993; Werner, 1991; Turner, Irwin, Tschann, & Millstein, 1993), and peer interactions (Jessor & Jessor, 1977; Newcomb & Bentler, 1989, McCord, 1990), or community and societal norms (Crockett & Petersen, 1993; Johnston, Malley, & Bachman, 1993; Blum, 1991; Bachman, Wallace, O'Malley, Johnston, & Kurth, 1991). The examination of factors such as social class and cultural norms, in addition to relationships with parents and peers, would be most critical in conceptualizing the etiology of the 'problem' behavior, as well as developing a plan for intervention. Donvan, Jessor, and Costa (1991) purports a problem-behavior perspective in which problem behaviors are defined socially and individuals who engage in them are though to have a particular set of unconventional attitudes, values, and perceptions. These individuals would express less compatibility with their parents' expectations and choose peers who share their unconventional views, regardless of their parents' response to such behaviors or their parenting style. These characterological descriptors reflect a personality disorder or social maladjustment perspective, a very clinical perspective on risk-taking (Lavery, Siegel, Cousins, & Rubovits, 1993). Such interventions in this social/environmental perspective

would include individual family therapy, group family therapy, group therapy, and support groups with peers.

In spite of the theories represented within the scientific literature, mainstream media continues to be somewhat preoccupied with the relationship between 'bad' behavior and those who continue to be perceived in general society as most responsible for children's development, parents. This viewpoint might be rooted in the persisting influence of Freud's psychoanalytic theory that specifically ties all behavior to family dynamics. The degree to which individuals engage in bad behavior, particularly adolescents, is assumed to be directly and significantly related to the degree to which they have received inappropriate or inadequate parenting. In addition, the mother, having been traditionally identified as the primary caretaker of children, is often of particular interest.

Several researchers have found a significant relationship between characteristics of parents' and children's behaviors (Foxcroft & Lowe, 1995; Slicker, 1996; Peterson & Rollins, 1987; Thompson, 1987; Nolte, 1983; Deakin, 1986). Most of this literature has addressed the influence of either general parenting styles or parents' attitudes about or engagement in risk-taking behavior on a child's behavior. Baumrind's (1991) typological parenting style theory suggests that the manner in which parents approach the needs of children for nurturing and limit-setting has a significant impact on the degree of social competency achieved, as well as on the behavioral adjustment of these children. Baumrind identified four separate forms of parenting styles: authoritative (high nurturance and moderate control), authoritarian (low nurturance and high control), indulgent (moderate to high nurturance and low control), and neglectful (low nurturance and low control). Slicker (1996) found that these styles significantly predicted problematic behaviors among youth in this country, with authoritative parenting being associated

with the most healthy adolescent development. Children of more nurturing parents are more likely to incorporate parental values, such as considerateness and fairness in interpersonal relations, into there own lifestyle. In this case, one would expect children to resist peer group values that are clearly different form family values (Moore, 1992). In studies of attitudes about risk-taking behaviors, researchers have found parents attitudes to be significantly related to the degree to which individuals engage in dangerous behaviors (Thompson, 1987; Nolte,1983; Deakin, 1986). Consequently, there is some support for the mainstream populace's association between engagement in bad behavior and parenting.

However, there are some gaps in the literature and some limitations in the designs of studies that assist in maintaining misunderstandings about the etiology of the engagement in behaviors that are not only potentially dangerous to self and others within their immediate life space, but also dangerous to the future of the productive citizenship within this country. Because such limitations have the potential to restrict the development of effective interventions, they would seemingly also warrant special attention. The following are just few noted by members of this research team.

First, at this point, there have been few studies that have specifically examined the degree to which each of the critical variables, represented by the theories described above, contributes to the variance in the engagement in at-risk behaviors. For example, studies have tended to examine only variables that are either associated with characteristics of individuals (i.e., personality, attitudes, etc.) or with parenting styles, but seldom both simultaneously.

Second, studies within the literature are sometimes based upon clinical samples of client populations within community mental health agencies, whereas others are based upon general populations not associated with clinical settings. Consequently, faulty generalizations might be

made given distinctly different qualities of between the two different samples and the theories that have been developed might be more relevant to clinical populations than to general populations of adolescents. The literature in its current state does not differentiate theoretical perspective association with a particular population.

Third, even when the sample is limited to a general population, seldom do the researchers address engagement in at-risk behaviors across a number of developmental stages (i.e., childhood, adolescence, late adolescents). Therefore, little is known about the influence of the degree of engagement in at-risk behaviors at one stage upon the degree to which individuals' will engage in them during subsequent stages. In addition, designs that do not examine this phenomenon tend to limit the development of knowledge addressing the long-standing influence of parenting during childhood. For example, the question of if and when parenting becomes inconsequential to individuals' behaviors is not clearly understood at this time.

Fourth, parenting styles, as typically defined by Baumrind, does not take under consideration the various faces of control that is more comprehensively defined by Parents Acceptance and Rejection Theory (Rohner, 1991). Parental Acceptance-Rejection Theory (PART) is a theory of socialization which attempts to explain and predict major consequences of parental acceptance and rejection for behavioral, cognitive, and emotional development of children and for the personality functioning of adults. Moreover, the theory attempts to explain why some children are better able than other children to cope with the corrosive effective parental rejection and emotional abuse. These are the two classes of outcome variables of primary interest to PART. PART also attempts to predict major psychological, environmental, and maintenance system antecedents to parental acceptance-rejection, and the theory is concerned with the relationship between parental acceptance-rejection and expressive behaviors in society. Though,

like Baumrind's parenting styles. PART notes parents' capacity to nurture and control. in addition, PART acknowledges the several different faces of control that Baumrind's model does not: Aggression/hostility; neglect/indifference; and undifferentiated. This is the authors' rationale for selecting this theory and associated measures, described below, for inclusion within this study.

Fifth, when parenting styles are examined, participants are requested to identify the parenting style that best describes the collective parenting of both mother and father or only requested to describe that of the primary caregiver. Findings that examined the unique qualities that both mother and father were seldom found in the literature and consequently, little is known about how mothers and fathers uniquely contribute to the degree to which individuals' engage in at-risk behaviors.

Sixth, though behaviors have been differentiated by gender within the literature ( ), other critical aspects of individuals' backgrounds have often gone unaddressed within the description of the population and particularly within the statistical analyses. If and how minority status, socioeconomic status of family of origin, and marital status of parents' are significantly related to the engagement in at-risk behaviors is too often ignored in empirical research.

The purpose of this study is to add to the literature addressing individuals' engagement in at-risk behaviors by attending to each of the limitations highlighted above. The following research questions will be specifically addressed: To what degree do demographics, mothers' parenting style and fathers' parenting style contribute to the variance in the engagement in at-risk behaviors during early and late childhood? To what degree do demographics, engagement in at-risk behaviors during early and late childhood, mother's parenting style, and fathers' parenting style contribute to the variance in the engagement in at-risk behaviors during early adolescence? To what degree do demographics, engagement in at-risk behaviors during early adolescence,

mother's parenting style, father's parenting style, and personality factors contribute to the variance in the engagement in at-risk behaviors during late adolescence and early adulthood?

Method

Participants

Sampling in this study included two distinctly different strategies. In the first sampling strategy, participants were university undergraduate students currently enrolled in a College of Education course wherein the instructor provides a number of options for students to receive extra credit toward the final grade. Instructors who chose to allow the participation in this study as one of the options for students to receive extra credit, informed students of times in which they might attend one of several group packet completion sessions scheduled by the principal investigator. At this time, several activities occurred in the following order: first, those students who chose to attend signed-in at the group session (this included providing their name); second, the purpose of the study was presented; third, the consent forms were reviewed, signed, and returned to the principal investigator; fourth, those students who wished to continue remained and the others were provided the opportunity to leave; fifth, students departed signed out at this time (this included providing their name as well as the name of their course instructor); sixth, numbered questionnaire packets were distributed and the included measures introduced; and, seventh, upon completion of the packet, participants then signed-out. The day immediately following data collection, course instructors were notified only of students that participated, however, students who attended, but chose not to participate were not identified. Sign-up sheets were destroyed at this time.

In the second sampling strategy, researchers contacted residence hall advisors to schedule opportunities to describe the study to dormitory residents and invite them to participate.

Residents who chose to volunteer to participate were provided with a token bar of candy after packet completion .

The following measures were included in each research packet: the researcher developed student demographic survey, the Developmental Survey of Risk Taking Behavior (Hollender, 1974), two of the Parental Acceptance-Rejection Questionnaires (PARQ) (Rohner, 1997) (one for the mother and one for the father), and the Personality Assessment Questionnaire Test (PAQ; Rohner, Saavedra, & Granum, 1979).

The demographic survey addresses participants' background information (i.e., birth date, gender, high school GPA, cumulative GPA, race/ethnicity, current academic status, parents' level of education, marital status of parents, and the number of siblings).

The Developmental Survey of Risk Taking Behavior, a self-report instrument, was designed to measure type and frequency of impulsive, risk-taking behavior. Form CR, the one used in this study, contains 123 items and includes age appropriate behaviors which might occur within each of the following life stages: in elementary school (40 items), in high school (52 items), and post-high school or as adults (31 items). Items are responded to as following: never (1), once or twice (2), a few times (3), fairly often (4), and very often (5). Higher scores are indicative of greater frequency of engagement of risk-taking behaviors.

The Parental Acceptance-Rejection Questionnaire (PARQ), a 60-item, self-report instrument, was designed to measure individuals' perceptions of parental acceptance and rejection. Parental acceptance-rejection is a bipolar dimension of parental behavior with acceptance defining one end of the continuum and parental rejection defining the other end. Parental warmth, assessed by 20 items, may be expressed physically in such ways a fondling, hugging, kissing, and caressing, or verbally in such ways as complimenting, praising, or saying

nice things to or about one's child. Parental rejection, i.e., the absence or significant withdrawal of warmth and affection is expressed in three different ways: aggression/hostility (15 items), wherein the individual perceives parents as angry, bitter, or resentful toward them or where the individual believed their parent(s) might have physically or verbally hurt him or her; neglect/indifference (15 items), wherein the individual perceived parents as unconcerned or uninterested in their well-being; and, in an undifferentiated rejection subscale (10 items) wherein adult child perceives his or her parents as withdrawing warmth from him or her, but where such rejection was not clearly reflected in aggression/hostility or neglect/indifference (i.e., "My mother does not really love me.") (Rohner, 1975). All versions of the PARQ consist of four scales: perceived parental warmth/affection, perceived parental aggression/hostility, perceived parental neglect/indifference, and perceived parental undifferentiated rejection. The items are scored as follows: almost always true (4); sometimes true (3); rarely true (2); and almost never true (1). Higher scores indicate maximum warmth/affection, maximum aggression/hostility, maximum neglect/indifference, or maximum undifferentiated rejection. Cronbach's coefficient alpha (Nunnally, 1967) was used as the principal measure of reliability. Coefficient alpha is a measure of internal consistency of times within a scale. A high alpha indicates that all items in a scale are sampling the same content area. PARQ reliability coefficients (alphas) range from .86 to .95, with a median reliability of . Concurrent and convergent validity for each of the PARQ subscales have been found with university students. There is also evidence of discriminant validity. Two of these instruments will be included in the packet. One will be completed with responses associated with participants' mothers; the, second, participants' fathers.

The Personality Assessment Questionnaire (PAQ) is a self-report instrument designed to assess an individual's perception of him/herself with respect to seven behavioral dispositions: (1)

hostility and aggression, including physical aggression, verbal aggression, passive aggression, and problems with the management of hostility and aggression; (2) dependency, the reliance of one person on another for comfort, approval, guidance, support, reassurance or decision making; (3) self-esteem, feelings about, attitudes toward, and perceptions of oneself, falling on a continuum from positive to negative; (4) self-adequacy, an overall self-evaluation of one's competence to perform daily tasks adequately, to cope satisfactorily with daily problems, and to satisfy one's own needs; (5) emotional responsiveness, a person's ability to freely and openly express her emotions; (6) emotional stability, an individual's constancy or steadiness of mood and to his or her ability to withstand minor setbacks, failures, difficulties or other stresses without becoming emotionally upset; and, (7) world view, a person's often unverbalized, global or overall evaluation of life and the universe as being essentially a good, secure, friendly, happy, unthreatening place having few dangers (positive) or as being a bad, insecure, threatening, unpleasant and hostile, or uncertain place full of dangers (negative). The PAQ was developed as a complement to the PARQ, described above. The items are scored as follows: almost always true (4); sometimes true (3); rarely true (2); and almost never true (1). All scales were designed so that a high score (for example a score of 4) indicates a maximum of the behavior that is predicted to be associated with the subscale. Analysis of the validity and reliability of the PAQ was based on university populations. Cronbach's coefficient alpha (Nunnally, 1967) was used as the principal measure of test reliability. Coefficient alpha is a measure of internal consistency of items within a scale. A high alpha indicates that all items in a scale are sampling the same content area. For the PAQ, reliability coefficients (alphas) range from .73 and .85 with a median reliability of .81. Evidence for concurrent, convergent, discriminant, and construct validities of these scales have been found (Rohner, 1991).

Data Analyses

Means and standard deviations will be presented for all variables examined and Pearson product correlations between all pair of variables will be presented. T-tests comparing means across at-risk behaviors across developmental stages will be performed in order to test for significant differences between stages. The three primary criterion variables were the three subscales of the Developmental Survey of Risk Taking Behavior: elementary age, high school age, and post-high school age. The independent variables were all other variables examined in each case. Given the exploratory nature of this study, three stepwise multiple regression analyses will be performed with each of the criterion variables.

Results

Sixty participants completed all measures in distributed research packets. The mean age of participants was 20 years; 82% (n = 50) were had majority racial status, 18% (n = 10) had minority status; 77% (n = 47) were female, 23% (n = 14) male, 80.3% (n = 49) of the sample had parents who were currently married, whereas 19.7% (n = 11) reported that their parents were divorced. Approximately 49% (n = 30) were freshmen, 31.1 % (n = 19) sophomores, 13.1% (n = 8) juniors, and 6.6% (n = 4) seniors.

Table 1 presents the means and standard deviations and the relationships between each of the criterion variables and all of the other variables examines. The engagement in at-risk behaviors during elementary school age years was found to be significantly related to the following: engagement in at risk behaviors as adults (r = .69), fathers aggression (r = .43); father's undifferentiated rejection (r = .36); father's neglect (r = .34); father's warmth (r = -.18); engagement in at risk behaviors in high school (r = .83); mother's education (r = - 27), mother's aggression (r = .58); mother's undifferentiated rejection (r = .28); mother's neglect (r = .34);

mother's warmth (r = -.46); emotional instability (r = .30); emotional unresponsiveness (r = 36); hostility and aggression (r = .54); negative worldview (r = .29); and, gender (r = .40). Undergraduate students who report higher levels of engagement in at risk behaviors during elementary school also tended to be those who: were male; are currently engaging in at risk behaviors and who had done so in high school as well; had mothers who were less educated, more aggressive, more warm, and engaged in more disciplinary behaviors; were emotionally unstable, emotionally unresponsive, more hostile and aggressive, and had a negative worldview.

The engagement in at-risk behaviors during high school age years was found to be significantly ($p < .05$) related to the following: engagement in at risk behaviors as adults (r = 68); engagement in at risk behaviors in elementary school years (r = .83); father's aggression (r = .53); father's undifferentiated rejection (r = .36); father's neglect (r = .32); father's warmth (r = -.32); current GPA (r = -.30); mother's education (r = -.28); mother's aggression (r = .51); mother's neglect (r = .28); mother's warmth (r = -.45); emotional instability (r = .35); emotional unresponsiveness (r = .30); hostility and aggression (r = .52); negative worldview (r = .32); and gender (r = .33). Undergraduate students who reported a tendency to engage in at-risk behaviors during the high school years also tended to be those who were male; who were currently engaging in at-risk behaviors and who did so during the elementary school years; whose fathers were aggressive, strong disciplinarians, neglectful, and less warm; whose mothers were less educated, more aggressive, more neglectful, and less warm; whose current GPA was lower; are currently emotionally unstable, emotionally unresponsive, having feelings of hostility and aggression, and a negative worldview.

The engagement in at-risk behaviors during the post high school years was found to be significantly ($p < .05$) related to the following: age (r = -.26); engagement in at risk behaviors

during elementary school (r = .69); father's aggression (r = .37); father's neglect (r = .47); father's warmth (r = -.33); engagement in at risk behaviors during high school (r = .68); mother's aggression (r = .55); mother's neglect (r = .39); mother's warmth (r = -.50); emotional instability (r = .30); hostility/aggression (r = .37); negative worldview (r = .32); parental marital status (.30); and racial status (-.30). Undergraduate students on this predominantly White campus who currently tend to engage in at risk behaviors also tend to be those who are older; emotionally unstable; have feelings of hostility and aggression; have a negative worldview; engaged moreso in at risk behaviors during elementary and high school years; whose fathers and mothers were less warm, more aggressive, and more neglectful in their parenting style; whose parents were divorced; and who were White.

Table 2 presents the results of the stepwise multiple regression analysis with the engagement of at-risk behaviors in during the elementary school years as the criterion variable. The degree to which participants' engagement in at-risk behaviors during high school and the mother's expressed aggression in parenting significantly contributed to approximately 72% (r square = .717) in the engagement in at-risk behaviors during high school age years, $F(2,51) = 64.71$, $p = .000$).

Table 3 presents the results of the stepwise multiple regression analysis with the engagement of at-risk behaviors in during the high school years as the criterion variable. The degree to which participants' engagement in at-risk behaviors during elementary school and the father's expressed aggression in parenting significantly contributed to approximately 72% (r square = .717) in the engagement in at-risk behaviors during high school age years, $F(2,51) = 65.20$, $p = .000$).

Table 4 presents the results of the stepwise multiple regression analysis with the participants reported current engagement in at-risk behaviors as the criterion variable. The degree to which participants' engaged in at-risk behaviors during elementary school, father's expressed neglect in parenting, mother's expressed warmth, and racial status (i.e., majority vs. minority) significantly contributed to approximately 59% (r square = .591) in the engagement in at-risk behaviors during high school age years, $F(4, 49) = 17.72$, $p = .000$).

Discussion

Findings suggests that the degree to which White freshmen and sophomore university students currently engage in at-risk behaviors is more strongly associated with early childhood experiences with parents and behaviors during the elementary school years, than with current personality variables. In one way, findings on the surface appear to support the social/environmental theories which imply that at-risk behaviors are integrally linked with family dynamics (Hawkins & Fitzgibbon, 1993; Werner, 1991; Turner, Irwin, Tschann, & Millstein, 1993). This is particularly true given that data indicates engagement in at-risk behaviors are significantly associated with fathers and mothers parenting and with individuals' earlier engagement in at-risk behaviors. Those individuals who reported a tendency to 'misbehave' during pre-college years and whose mothers expressed less warmth and more aggression, and whose fathers expressed more aggression and more neglect were found to currently engage in at-risk behaviors more often.

On the other hand, though the authors initial intent was to tease out the sources of the most critical contributor to individuals' engagement in dangerous behaviors, the design of the study does not exclude the explanation that individuals' perceptions of their parents lack of warmth, aggression, and neglect might have been a response to their behavior problems that might

have been biologically or neurologically-based. Consequently, these findings do not totally refute the potential for support for biological based theories (Irwin & Millstein, 1986; Irwin & Ryan, 1989). All parenting to some degree is a 'reaction' to what the child, upon birth, brings to the home genetically, neurologically, or hormonally. The child who might be 'wired' toward impulsivity and danger might solicit from parents, in their efforts to control and protect their child, even from him or herself, very unappreciated behaviors that might be perceived as aggressive and lacking warmth. The perception of neglect might, in fact, be tough love, wherein parents requires that a child to experience the negative consequences of their inappropriate decision-making at a time when the child expects protection and rescue. Or, what the authors believe to be the worse case scenario, perceived neglect might be a reflection of parents' physical and emotional separation from their child out of fatigue and having depleted all possible resources for guidance and support in protecting their child from themselves.

Regardless of the theory adopted, clinicians must be able be able to ask the right questions in order to discern whether the etiology of engagement in at-risk behaviors is biological or social/environmental in nature in order to know how to best proceed in treatment and referrals. Given that mothers and fathers' level of education and past and current GPAs were not found to significantly contribute to the variance in engagement in at risk behaviors at any developmental stage, practitioners must began to see beyond rose colored glasses that limit our sight in working with late adolescence and/or early adult White, academically competent, middle- and upper-class clientele. Parents in families of origin even in these households may be neglectful and aggressive; children from these households might also have 'wiring' toward impulsivity or acting out. Given that early engagement was found to strongly associated with later engagement in at-risk

behaviors, this would be particularly important for clinicians working with children who have been identified by school staff as having persisting behavior problems.

First, these findings do not shed any light on minority university students' engagement in at risk behaviors and readers are cautioned to limit conclusions to White university students only. In addition, the same is true for providing support of any explanation for non-university young adult populations' engagement in at-risk behaviors. Future research is strongly recommended in these particular areas.

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Table 1

Correlation matrix with means and standard deviations (n = 60)

Variables	Elementary at-risk Behaviors Mean = 79.87 SD = 23.41	High School at-risk Behaviors Mean = 98.32 SD = 30.25	Adult at-risk Behaviors Mean = 66.16 SD = 13.19
1.Elementary Behaviors		.83**	.69**
2.High School Behaviors			.68**
3.Adult Behaviors			
4.Age Mean = 20 SD = 1.4	.25	-.20	-.26*
5.Father education Mean = 14.05 SD = 1.53	-.12	-.15	-.18
6.Father Aggression Mean = 27.18 SD = 8.37	.43**	.53**	.37**
7.Father Rejection Mean = 29.23 SD = 7.47	.36**	.36**	.14

Table 1 (continued)

Correlation matrix with means and standard deviations (n = 60).

Variables	Elementary at-risk Behaviors Mean = 79.87 SD = 23.41	High School at-risk Behaviors Mean = 98.32 SD = 30.25	Adult at-risk Behaviors Mean = 66.16 SD = 13.19
8. Father Neglect Mean = 23.60 SD = 5.65	.34**	.36**	.14
9. Father Warmth Mean = 89.33 SD = 15.33	-.18	-.32*	-.33*
10. Mother education Mean = 13.33 SD = 1.54	-.27*	-.28*	-.22
11. Mother Aggression Mean = 28.83 SD = 8.69	.58**	.51**	.55**
12. Mother Rejection Mean = 31.78 SD = 6.26	.28*	.25	.20

Table 1 (continued)

Correlation matrix with means and standard deviations (n = 60)

Variables	Elementary at-risk Behaviors Mean = 79.87 SD = 23.41	High School at-risk Behaviors Mean = 98.32 SD = 30.25	Adult at-risk Behaviors Mean = 66.16 SD = 13.19
13. Mother Neglect Mean = 21.77 SD = 4.13	.34**	.28*	.39**
14. Mother Warmth Mean = 94.20 SD = 11.21	-.46**	-.45**	-.50
15. Cumulative GPA Mean = 3.11 SD = .47	-.22	-.30*	-.07
16. High School GPA Mean = 3.50 SD = .32	-.20	-.24	-.09
17. Dependency Mean = 25.32 SD = 4.76	-.20	-.14	.16

Table 1 (continued)

Correlation matrix with means and standard deviations (n = 60).

Variables	Elementary at-risk Behaviors Mean = 79.87 SD = 23.41	High School at-risk Behaviors Mean = 98.32 SD = 30.25	Adult at-risk Behaviors Mean = 66.16 SD = 13.19
18. Emotional Instability Mean = 20.33 SD = 4.06	.30*	.35**	.30**
18. Emotional Unresponsiveness Mean = 17.70 SD = 4.43	.36**	.30**	.23
19. Hostility/Aggression Mean = 18.62 SD = 4.54	.54**	.52**	.37**
20. Negative Worldview Mean = 14.28 SD = 5.12	.28*	.32*	.32*
21. Self Adequacy Mean = 15.35 SD = 4.53	.14	.19	.15

Table 1 (continued)

Correlation matrix with means and standard deviations (n = 60).

Variables	Elementary at-risk Behaviors Mean = 79.87 SD = 23.41	High School at-risk Behaviors Mean = 98.32 SD = 30.25	Adult at-risk Behaviors Mean = 66.16 SD = 13.19
22. Self Esteem Mean = 15.82 SD = 4.53	.20	.21	.22
23. Parental Marital Status 1 = Married 2 = Divorced	.20	.19	.30*
24. Sex 1 = Female 2 = Male	.40**	.33**	.24
25. Racial Status 1 = Majority 2 = Minority	-.06	-.06	-.30*

* Significant $p < .05$

** Significant $p < .01$

Table 2

Results of Stepwise Multiple Regression Analysis with the Engagement in At-risk Behaviors in Elementary School age years as the Criterion Variable

Variable	B Value	Standard Error	Beta	t	Prob>F
Constant	8.55	6.95		1.23	.224
High School at-risk behaviors	.53	.07	.69	7.88	.000
Mothers' Aggression	.68	.25	.25	2.79	.007

Note. None of the other variables were found to contribute significantly.

Table 3

Results of Stepwise Multiple Regression Analysis with the Engagement in At-risk Behaviors in High School age years as the Criterion Variable.

Variable	B Value	Standard Error	Beta	t	Prob>F
Constant	.83	9.32		.09	.93
Elementary at-risk behaviors	.94	.11	.72	8.76	.000
Fathers' Aggression	.86	.30	.23	2.85	.006

Note. None of the other variables were found to contribute significantly.

Table 4

Results of Stepwise Multiple Regression Analysis with the Engagement in At-risk Behaviors in Post-High School age years as the Criterion Variable.

Variable	B Value	Standard Error	Beta	t	Prob>F
Constant	68.1	16.48		4.13	.00
Elementary at-risk behaviors	.29	.06	.51	4.69	.00
Father's Neglect	.46	.24	.19	1.88	.06
Racial Status	-8.65	3.84	-.22	-2.26	.03
Mother's Warmth	-.27	.21	-.23	-2.23	.03

Note. None of the other variables were found to contribute significantly.